

CLAIMS

1. Device for the automatic formation of packs of panels (11) of electro-welded mesh, arranged downstream of a production machine comprising a work plane, the device comprising expulsion means (12) able to arrange said panels (11) emerging from said machine onto an accumulation plane (13) located as an extension to the work plane of said machine, turnover means (14) able to turn over every other of said panels (11) with respect to the position in which it exits said machine, and discharge means (16) to discharge said panels (11), characterized in that it comprises switching means (15) arranged downstream of said expulsion means (12) and able to direct, alternately and substantially continuously, at least one of said panels (11) either directly towards said accumulation plane (13) or towards said turnover means (14).
2. Device as in claim 1, characterized in that said turnover means (14) comprise guide means (30) conformed so as to rotate said panels (11) sent towards them substantially through 180° and to position them overturned with respect to said accumulation plane (13).
3. Device as in claim 2, characterized in that said guide means (30) comprise at least a first inclined rectilinear segment (30a) and at least a second curved segment (30b) able to connect said first rectilinear segment (30a) with said accumulation plane (13).
4. Device as in claim 3, characterized in that said second curved segment (30b) defines an angle of about 180°.
5. Device as in any claim from 2 to 4 inclusive, characterized in that said turnover means (14) comprise conveyor means (36) able to transport said panels (11) at least along said first segment (30a) and part of said second segment (30b).

6. Device as in claim 5, characterized in that said conveyor means comprise at least a chain (36).

7. Device as in claim 5, characterized in that said conveyor means (36) comprise a shaped belt.

5 8. Device as in any claim from 2 to 7 inclusive, characterized in that, in an initial zone of said first segment (30a), said turnover means (14) comprise attachment means (35) able to prevent said panels (11) from turning towards said expulsion means (12).

10 9. Device as in any claim from 2 to 8 inclusive, characterized in that said turnover means (14) comprise second expulsion means (37) arranged in a terminal zone of said second segment (30b) and able to take said panels (11) towards said accumulation plane (13).

15 10. Device as in claim 1, characterized in that said switching means (15) comprise at least a board (27) movable between a first position wherein it directs said panel (11) directly towards said accumulation plane (13) and a second position wherein it directs said panel (11) towards said
20 turnover means (14).

11. Device as in claim 1, characterized in that said expulsion means (12) are arranged downstream of the machine which produces said panels (11) and comprise a frame (20) on which are mounted rollers (21, 22) arranged on opposite
25 sides with respect to a plane of feed (23) on which said panels (11) are able to advance.

12. Device as in claim 11, characterized in that at least one (21) of said rollers is movable by means of actuator means (24) between an inactive position wherein it is
30 relatively distant from said plane of feed (23), and an active position wherein it is in contact with at least one of said panels (11) passing on said plane of feed (23).

13. Device as in claim 1, characterized in that said

discharge means (16) comprise at least two rotary elements (48) each one having a blade conformation, and able to selectively rotate around its own median axis so as to cause the fall and discharge of said panels (11).

5 14. Device as in claim 13, characterized in that said discharge means (16) are arranged in correspondence with said accumulation plane (13).

15. Device as in claim 1, characterized in that said turnover means (14) are arranged above said accumulation
10 plane (13).

16. Device as in any claim hereinbefore, characterized in that it comprises auxiliary guide means arranged at outlet from said turnover means (14), and able to temporarily retain at least a first overturned panel (11) above said
15 accumulation plane (13) in order to allow a second straight panel (11) to be positioned superimposed.

17. Method for the automatic formation of packs of panels (11) of electro-welded mesh, comprising a first positioning step to position at least one panel (11) on an accumulation
20 plane (13) arranged as a substantial extension of the work plane of the machine which produces the panels (11), a second turnover step by means of turnover means (14) to overturn at least every other one of said panels (11) with respect to the position in which it exits said machine in
25 order to arrange it overturned above said accumulation plane (13), and a third step to discharge said panels (11), characterized in that it provides that at least every other panel (11) is alternately directed, by means of switching means (15), either directly towards said accumulation plane
30 (13) or towards said turnover means (14), so as to render substantially simultaneous said first positioning step to position a first panel (11) on said accumulation plane (13) and said second turnover step to overturn a second panel

(11).

18. Method as in claim 17, characterized in that it provides that, at the start of the cycle, at least two panels (11) are arranged in cooperation with said turnover means (14).

5 before sending a third panel (11) towards said accumulation plane (13) in order to constitute an accumulation supply in said turnover means (14) comprising at least one panel (11).

19. Method as in claim 17 or 18, characterized in that each of said panels (11) takes about 4 seconds to be positioned
10 on said accumulation plane (13) and then discharged.

20. Method as in any claim from 17 to 19 inclusive, characterized in that it provides that an overturned panel (11) is positioned on guide means arranged above said accumulation plane (13), and that said overturned panel (11)
15 is then discharged on a subsequent straight panel (11) arranged on said accumulation plane (13) in order to allow the simultaneous discharge of a pack of two panels (11).